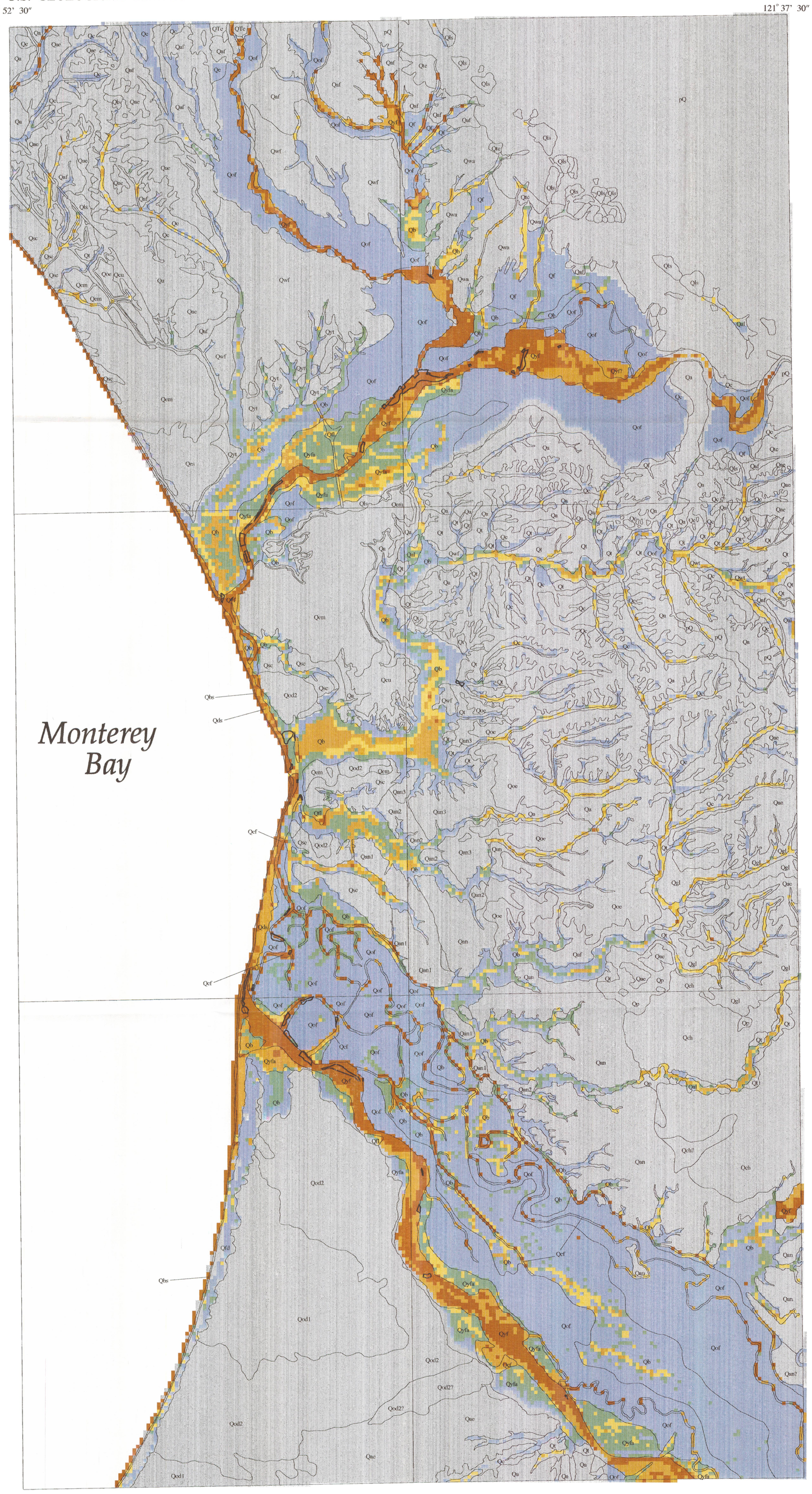
Open-File Report 94-662
PLATE 1

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

121° 52' 30"
121° 37' 30"
37° 00'
36° 52' 30"
36° 45'
36° 37' 30"



EXPLANATION

SUSCEPTIBILITY (0-1 scale)

- > 0.98
- 0.75 - 0.97
- 0.50 - 0.74
- 0.25 - 0.49
- 0.0 - 0.24
- zero

— Geologic contacts

Lateral spreads in the 1989 Loma Prieta earthquake

Map Symbol*	Description of Geologic Unit	Sedimentary Facies
Qbs	Beach sand	beach
Qds	Dune sand	eolian
Qfd	older dunes	eolian
Qb	Basin deposits	overbank
Qal	Undiff. alluvium	channel & overbank
Qf	Alluvial fan deps.	alluvial fan
Qyf	Younger floodplain	channel & point bar
Qyfa	Thin veneer of Qyf	levee & overbank
Qof	Older floodplain	overbank
Qc	Colluvium	hillslope deposit
Qcf	Channel fill	channel
Qfl	Artificial fill	varied
Qls	Landslide deposits	hillslope debris
Qod1	Younger coastal dunes	eolian
Qod2	Older coastal dunes	eolian
Qch	Alluvial fan: Chualar	alluvial fan
Qt	Terrace, undiff.	fluvial, undiff.
Qes	Sunset Beach	eolian
Qyt	Younger terraces	paludal
Qoe	Older eolian deposits	eolian
Qtc	Castroville terrace	fluvial, undiff.
Qan1	Antioch Terrace	fluvial, undiff.
Qan2	Antioch Terrace	fluvial, undiff.
Qan3	Antioch Terrace	fluvial, undiff.
Qem	Manresa dunes	eolian
Qwf	Watsonville fm.	fluvial, undiff.
Qwa	Watsonville fan	alluvial fan
Qsc	Santa Cruz mar. ter.	marine, fluvial
Qp	Placentia fan deps.	alluvial fan
Qcu	Coastal ter., undiff.	marine, fluvial
Qa	Aromas sand	eolian, fluvial, undiff.
Qae	Aromas, eolian	eolian
Qaf	Aromas, fluvial	fluvial
Qgl	Gloria Fan deposits	alluvial fan
QTc	Continetal deposits	nonmarine, undiff.
pQ	Pre-Quaternary, undif.	sed., ign., meta. rocks

* identification uncertain where queried on map

Base from U.S. Geological Survey California 7.5' quadrangles Watsonville West, Watsonville East, Moss Landing, Prunedale, Marina, and Salinas.

Projection: Universal Transverse Mercator, zone 10;
grid size: 420 x 230; grid origin: 600,000 4,053,600;
map cell size: 100 m; number of non-null cells: 75,072

SCALE 1:62500

1 .5 0 1 2 3 4 5 MILES
1 .5 0 1 2 3 4 5 KILOMETERS
0 1 2 3 4 5 6 7 8 9 10 11 THOUSAND FEET

Geology from W.R. Dupré and J.C. Tinsley, 1980. Locations of 1989 Loma Prieta lateral spreads from J.C. Tinsley. Nonzero susceptibility values, S_R, from combination of four digital maps—sand content (%), distance to surface water (m), average age (yrs BP), and ground slope (%)—by the regression equation
S_R = 4.8 sand – 0.56 ln distance – 0.95 log age – 0.28 ln slope.

GIS by G. Phelps

Susceptibility to Earthquake-Induced Lateral-Spread Ground Failure in the Monterey Bay Area, California

By

Richard J. Pike, Richard L. Bernknopf, John C. Tinsley III, and Robert K. Mark

1994

AREA OF MAP

APPROXIMATE MEAN DECLINATION, 1994